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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/912,586	07/24/2001	Elizabeth Belva Hamel	SVL920010010US2	7180

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EXAMINER	
PHAM, KHANH B	

ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/912,586	HAMEL ET AL.	
	Examiner	Art Unit	
	Khanh B. Pham	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 January 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2-3*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The formal drawings were received on January 22, 2002. These drawings are acceptable by the examiner.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Data Loading From a Remote Data Source Record by Record".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-24 are rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding **claims 1, 9, 17**, the phrase **"or their equivalent"** at line 7 renders the claims indefinite because the claims include elements not actually disclosed (those encompassed by "or their equivalent"), thereby rendering the scope of the claims unascertainable. See MPEP § 2173.05(d).

Claims 2-8, 10-16, 18-24 are also rejected by virtual of their dependencies to the rejected independent claims.

6. **Claims 5, 13, 21** recite the limitation "**the same cursor name**" in line 4. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claims 1-2, 6-10, 14-18, 22-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Corporation ("Datajoiner: a Multidatabase Server Version 1), hereinafter "**IBM**", and in view of Hejlsberg et al. (US 6,151,602), hereinafter "**Hejlsberg**".

As per claims 1, 9, 17, IBM teaches a method, a system and a program storage device for loading data from a remote data source, in a computer system network connecting a source site and a target site via a database connection communication line (See page 11, Fig. 4), the method comprising the following steps:

- "(a) coupling the source site to at least one data source and to a software server having multi-database access to DBMSs" at page 11, Fig. 4;
- "(b) at the target site requesting data loading from the source site via a block of Structured Query Language (SQL) statements or their equivalent" at page 7, Fig. 1; and
- (c) transporting data via the database connection communication line according to a multi-database access communication protocol" at page 12, 1st paragraph.

IBM does not teach "transporting data record by record" nor "the target site loading records concurrently with the unloading of records in the source site" as claimed. However, Hejlsberg teaches a similar method for loading data from a remote data source (See Fig. 3), wherein data is transported "record by record" and "the target site loading records concurrently with the unloading of records in the source site" at Col. 7 lines 30-37. (Examiner notes: Hejlsberg teaches a data packet for transmitting data from a database using sequential or streaming method wherein data is transmitted "one piece of information at a time". At Fig. 3, Hejlsberg shows the layout of a data packet comprises row data, therefore, "piece of information" is correspond to a row data. Hejlsberg also provides the advantage of using this streaming method which "allows the

system to process data while it is still being received; this is important, for instance, for data being received across the Internet"). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine IBM and Hejlsberg's teaching to improve data transmitting speed by "allowing the system to process data while it is still being received".

As per claims 2, 10, 18, IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. Hejlsberg also teaches: "a data record being transported across the database connection communication line as soon as one or more data records are unloaded from the source site, and data loading at the target site beginning as soon as a record was transported to the target site" at Col. 7 lines 30-36 and Col. 7 line 66 to Col. 8 line 17.

As per claims 6, 14, 22, IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM also teaches: "the server site having access to multiple data sources, physically distributed and disparate DBMSs, residing on different hardware systems and possibly storing data in a different format" at page 11, Fig. 4.

As per claims 7, 15, 23, IBM and Hejlsberg teach the method, system and program storage device according to claims 6, 14, 22 as discussed above. IBM also teaches: "the server site loading data from multiple data sources, further comprising a step for using a means for consolidating data from multiple data sources" at page 1, 4th and 5th and page 11, Fig. 4.

As per claims 8, 16, 24, IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM also teaches: "the database connection communication line utilizing the TCP/IP protocol" at page 11, 3rd paragraph, and "the software server having multi-database access to DBMSs including a Distributed Relational Database Architecture (DRDA)" at page 12, 1st paragraph.

10. **Claims 3, 11, 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM and Hejlsberg as applied to claims 1-2, 6-10, 14-18, 22-24 above, and further in view of Gottemukkala ("Interfacing Parallel Applications and Parallel Databases"), hereinafter "**Gottenmukkala**".

As per claims 3, 11, 19, IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM and Hejlsberg do not explicitly teach: "the data loading being performed in a pipeline manner, loading data records in multiple partitions with a plurality of parallel streams, pointed to by a plurality of data source partition cursors", However, Gottemukkala teaches a method for perform database query in parallel using cursors (See Fig. 2), wherein "the data loading being performed in a pipeline manner, loading data record in multiple partitions with a plurality of parallel streams, pointed to a plurality of data source partition cursors" at page 2, Col. 1 and Figs. 2 –7. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify IBM and Hejlsberg teaching so that the data loading could be performed in parallel as taught by Gottemmukkala, in order "to speed up the performance of complex queries, which

makes manipulation of large data sets feasible and manageable" (page 1, Col. 1, 1st paragraph).

11. **Claims 4-5, 12-13, 20-21 are rejected under 35 U.S.C. 103(a)** as being unpatentable over IBM and Hejlsberg as applied to claims 1-2, 6-10, 14-18, 22-24 above, and further in view of Vassilakis et al. ("Implementing Embedded Valid Time Query Languages"), hereinafter "Vassilakis".

As per claims 4, 12, 20, IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM and Hejlsberg do not explicitly teach: "the block of SQL statements comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE mode". However, Vassilakis teaches a method of using SQL to retrieve data from database "a row-at-a-time" similar to IBM and Hejlsberg teaching wherein "the block of SQL statements comprises dynamic executable SQL statements performing in the EXECUTE IMMEDIATE mode" at page 7. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to implement IBM and Hejlsberg's teaching in "EXECUTE IMMEDIATE mode" in order to process the dynamic formulated SQL statement.

As per claims 5, 13, 21, IBM and Hejlsberg teach the method, system and program storage device according to claims 1, 9, 17 as discussed above. IBM and Hejlsberg do not teach: "the block of SQL statements comprises: a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing separately each SELECT statement result record unloading from the server site, and a LOAD command

and an operator INCURSOR with the same cursor name for pointing to the receiving record at the target site". However, Vassilakis teaches a method of using SQL to retrieve data from database "a row-at-a-time" similar to IBM and Hejlsberg's teaching using "a SQL DECLARE CURSOR FOR SELECT statement, for defining a cursor referencing separately each SELECT statement result record unloading from the server site, and a LOAD command and an operator INCURSOR with the same cursor name for pointing to the receiving record at the target site" at page 2, section 2.2. As noted by Vassilakis, "using cursors, an application may obtain addressability to tuples stored in the database (one tuple at a time), fetch data values into its address space, as well as delete or modify the tuples"(page 3, section 2.2). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Vassilakis with IBM and Hejlsberg's teaching in order to allow applications to address considered database data at row level (i.e. tuple level) instead of data table level, in order to reduce unnecessary data transfer by transferring only relevant rows instead of the whole table.

Conclusion

12. The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is **(703) 305-9601** for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (703) 308-7299. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)746-7240.

Khanh B. Pham
Examiner
Art Unit 2177

KBP
January 23, 2004

JOHN BREENE
SUPERVISORY PATENT EXAMINER
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